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- 24. The proc ss of claim 22 wherein the reaction is performed in a temp rature range from about 55° C. to about 85° C.
- 25. The process of claim 22 wherein the reaction is performed from about 6 hours to about 48 hours.
- 26. The process of claim 22 wherein at least two by-products are formed.
- 27. The process of claim 22 wherein 17β-hydroxy-17α-methyl-5α-androst-1-en-3-one is formed at a yield of about 65% to about 75%.
 - 28. The process of claim 22 wherein:

mestanolone and IBX are present in a molar ratio from about 1:1 to about 1:2:

the reaction is performed in a temperature range from about 55° C. to about 85° C. for about 6 hours to about 48 hours; and

 17β -hydroxy- 17α -methyl- 5α -androst-1-en-3-one is formed at a yield of about 65% to about 75%.

- 29. The process of claim 28 wherein at least two by-products are formed.
 - 30. The process of claim 22 wherein:

mestanolone and IBX are present in a molar ratio of about 1:1.5;

the reaction is performed in a temperature range from about 60° C. to about 75° C. for about 6 hours to about 48 hours:

 17β -hydroxy- 17α -methyl- 5α -androst-1-en-3-one is formed at a yield of about 65% to about 75%; and

at least two by-products are formed.

31. The process of claim 30 wherein the reaction is performed in a t mperature range from about 65° C. to about 70° C.





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32. The proc ss of claim 31 wherein the reaction is performed in a mixture of toluene and dimethyl sulfoxide.